



THE HEALTH OF MASSACHUSETTS

A Coordinated Response to Heart Disease and Stroke

Partnership for a Heart Healthy Stroke Free Massachusetts

A portrait of a woman with dark, wavy hair, wearing a dark blue textured sweater. She has her arms crossed and is looking directly at the camera with a slight smile. The background is a soft, out-of-focus beige.

ORGANIZATIONS

SOCIETY

COMMUNITY

We are grateful to the Centers for Disease Control and
Prevention for funding our project

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INTRODUCTION

The Partnership for a Heart Healthy Stroke Free Massachusetts strives to reduce heart disease and stroke through community action and public policies that promote healthy behaviors, speed response to heart and stroke emergencies and improve access to care for all Massachusetts residents.

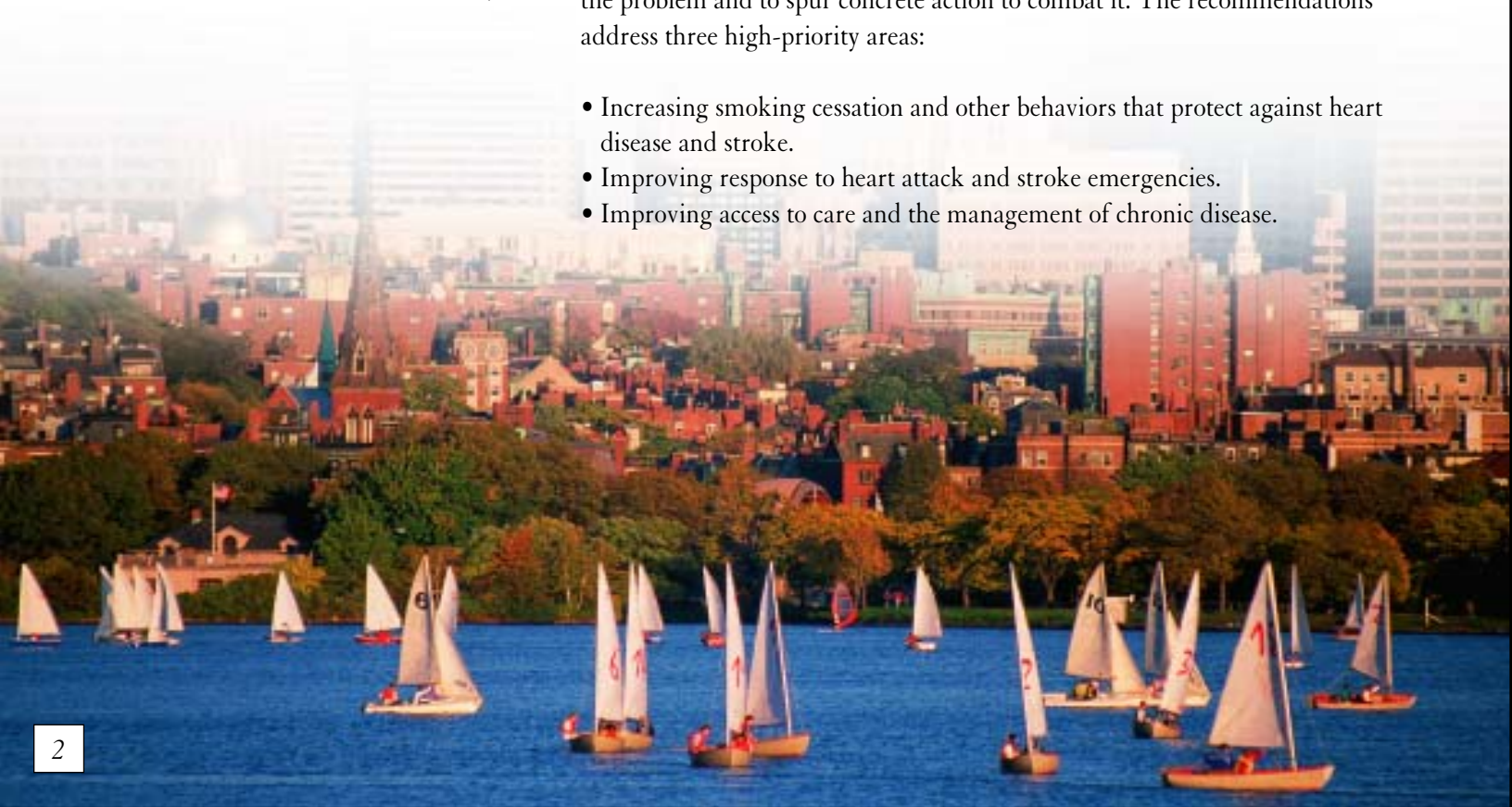
Few public health issues are more challenging than reducing heart disease and stroke. Together, these and other diseases of the heart and blood vessels kill more people in Massachusetts and the nation than any others, including all types of cancer combined.^{1,2} Furthermore, some conditions (obesity, diabetes) that contribute to these diseases are on the rise, while others (high blood pressure, high cholesterol) continue to affect as many of our residents as they did a decade or more ago.^{3,4}

From the Berkshires to the Cape, government officials, public health professionals, and community leaders are working to help our towns, schools, workplaces, and healthcare centers make changes that promote a heart-healthy and stroke-free Massachusetts.

In 2001, the Partnership for a Heart Healthy Stroke Free Massachusetts (the Partnership) was formed to unite the many parties committed to combating heart disease and stroke in the Commonwealth. The Partnership is a collaborative of more than 100 organizations and agencies. Its goal is to launch and sustain a statewide, coordinated effort to prevent and control heart disease and stroke.

This report, *The Health of Massachusetts: A Coordinated Response to Heart Disease and Stroke*, shares the Partnership's recommendations for combating these diseases in Massachusetts. It is designed to raise awareness of the scope of the problem and to spur concrete action to combat it. The recommendations address three high-priority areas:

- Increasing smoking cessation and other behaviors that protect against heart disease and stroke.
- Improving response to heart attack and stroke emergencies.
- Improving access to care and the management of chronic disease.



THE BURDEN OF HEART DISEASE AND STROKE

(Excerpts from *The Health of Massachusetts: Impact of Heart Disease and Stroke*)

Keep in Mind . . .

- Throughout this report, the term *Black* refers to non-Hispanic Blacks and the term *White* refers to non-Hispanic Whites.
- Wherever possible, data have been *age-adjusted*. This means that they have been statistically modified to account for age differences in the populations being compared. Age-adjusted data provide a more accurate picture of the relative rates of disease or death in different groups, such as men and women or Blacks, Whites, and Hispanics.

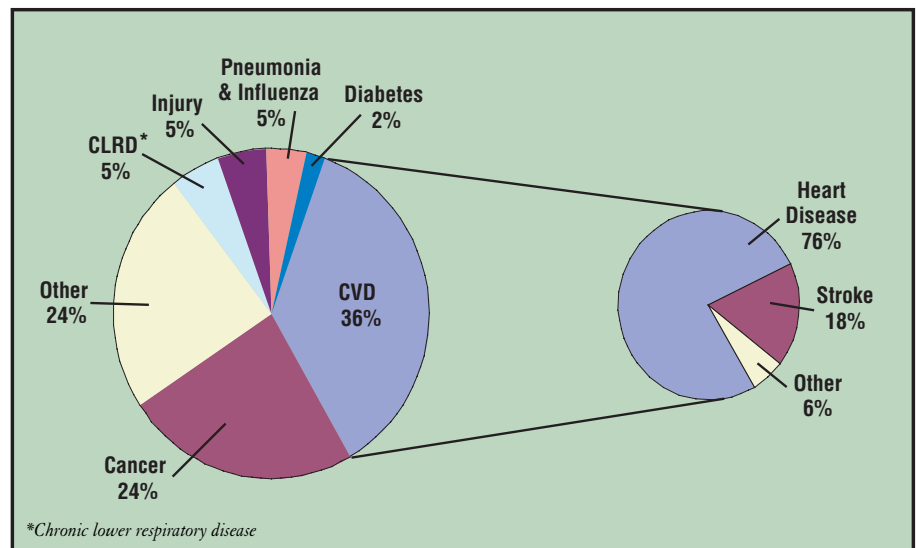
The Deadliest Disease

Each year, more than 20,000 Massachusetts residents die from cardiovascular disease (CVD), the many disorders of the blood vessels feeding the heart and brain. CVD caused more than a third of all deaths in Massachusetts in 2002, more than the next three leading causes of death combined (Figure 1).¹

Most CVD deaths are the result of heart disease and stroke. These are the first and third leading causes of death both in the state and nationally.^{1,2} Heart disease encompasses a variety of conditions. By far the most familiar and common of these is coronary heart disease (CHD), the ailment that leads to heart attacks.⁵ In 2002, Massachusetts residents died from coronary heart disease at a rate of 142 per 100,000 people. This compares favorably to the Healthy People 2010 (HP2010) goal of 166 deaths per 100,000 people. The death rate for stroke that year was 50 per 100,000 (HP2010 goal – 48 deaths per 100,000).¹

While the death rate from CHD in Massachusetts has declined continuously since 1994, the death rate from stroke has remained virtually unchanged for the past decade and is slightly higher than the target set by the Federal government.^{1,2}

Figure 1. Causes of death in Massachusetts, 2002



Source: MDPH, Massachusetts Deaths 2002

High-Priority Communities

The rate of death from heart disease and stroke is not uniform throughout the Commonwealth. Differences in the racial/ethnic makeup of communities and in the ages, income levels, and educational attainment of their residents all contribute to the disparities. For these reasons, the Partnership has identified five of Massachusetts's largest cities as priority communities: Fall River, New Bedford, Lowell, Lawrence, and Springfield. All but Springfield have death rates from CHD that exceed the state's average.¹ Springfield is included because high rates of heart disease risk factors such as diabetes and high blood pressure put its residents at increased risk.

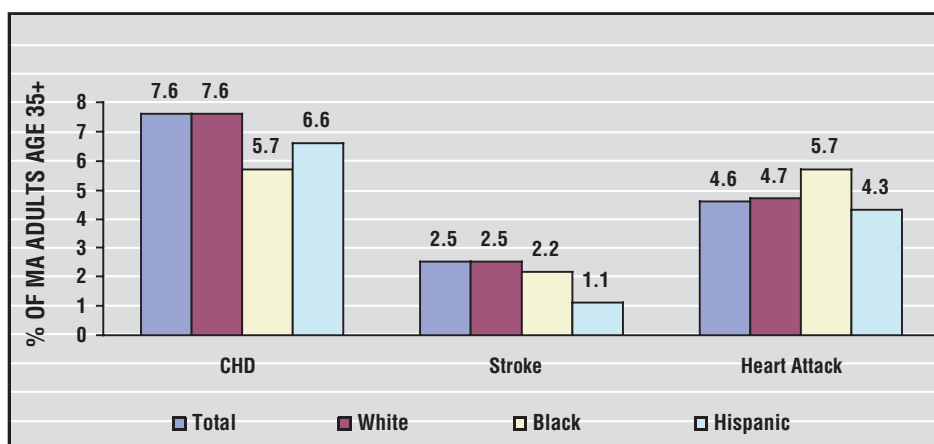
Some Groups Are More Affected than Others

Prevalence

In 2003, 8% of Massachusetts adults age 35 or older reported having CHD, 5% reported having a heart attack, and 3% reported having a stroke.⁴ The prevalence of CVD is more severe within some groups than others (Figure 2):

- While a higher proportion of Whites report having CHD, a higher proportion of Blacks reported having had a heart attack.⁴
- Men report more CHD and heart attack than women.
- Individuals aged 75 or older report 18 times the level of stroke, 15 times the level of CHD, and 23 times as many heart attacks as those aged 35-44.⁴

Figure 2. Prevalence of CHD, stroke, and heart attack by race/ethnicity, 2003



Source: Massachusetts Behavioral Risk Factor Surveillance System (MBRFSS), 2003.





Mortality

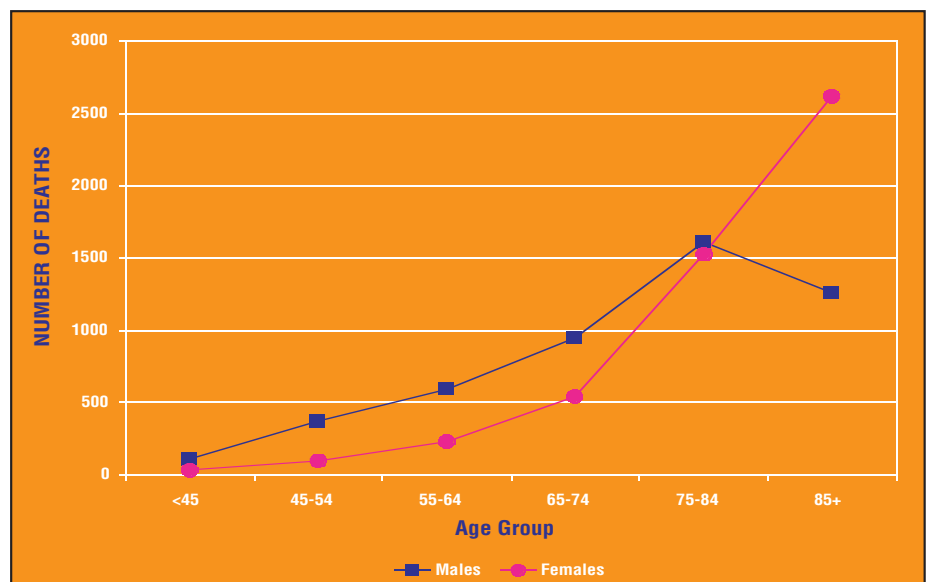
With each added decade of life from age 45 on, the rate of death more than doubles for CHD and more than triples for stroke. Given that the life expectancy of women is higher than men, there are greater numbers of women at risk for CHD death. As a result, more women die annually from CHD as compared to men, though the actual rate of death (number of deaths/population at risk) from the disease is higher in men (Figure 3). Stroke death rates for men and women are about the same.¹

Among racial/ethnic groups, Blacks had the highest CHD death rate in 2002 (150 per 100,000), followed closely by Whites (142 per 100,000). Rates were lower for Hispanics (111 per 100,000) and Asian/Pacific Islanders (75 per 100,000).¹ Before the age of 75, Blacks and Hispanics have the highest rates of CVD.¹ Such racial differences are common nationwide and are typically attributed to a higher prevalence of risk factors, such as high blood pressure, among minority populations, as well as to more limited access to healthcare. They may also reflect differences in the age distribution of different racial/ethnic groups in the population.

Death rates are higher within different parts of the Commonwealth as well. The maps in Appendix A show county-by-county death rates for stroke, CHD, and CVD.



Figure 3. Number of CHD deaths by age group and sex, MA 2002



Source: MDPH, Registry of Vital Records and Statistics, 2002

A Population at Risk

Massachusetts lags behind Federal targets for reducing the major contributors to heart disease and stroke: high blood pressure, high cholesterol, tobacco use, obesity, and diabetes (Table 1). The Federal targets are part of the government's *Healthy People 2010* health promotion and disease prevention initiative.^{2, 4}

Several factors have more recently emerged as likely contributors to heart disease and stroke as well. Mental illness, stress, and atrial fibrillation (fast, irregular heartbeats) are among them. Massachusetts Department of Mental Health (DMH) clients aged 25-64 years old are more than three times as likely to die of cardiac disease as their same-aged peers in the general population,¹ while work-related stress has been linked to increased risk for coronary heart disease.¹ Additionally, atrial fibrillation affects 2.2 million adults in the US and causes one of every seven strokes – 70,000 a year.¹



The Costs of Heart Disease and Stroke are High

Disorders of the heart and blood vessels rob the Commonwealth of more than 200,000 years of productive life each year and cost more than \$3 billion annually in hospital charges alone, accounting for 24% of all hospital charges.^{6, 7}

Reducing the number of Massachusetts adults at risk for heart disease and

stroke by just 5% would save an estimated \$4.68 billion a year in medical costs, prescriptions, worker's compensation, and lost productivity – enough money to pay wages and benefits to some 100,000 workers or to supply median incomes to about 90,000 households.⁸

These diseases cost individuals dearly as well. Massachusetts residents who have had a heart attack or stroke report feeling ill nearly two weeks out of every month and having pain or other symptoms severe enough to limit their activities seven or eight of every 30 days.⁴ An estimated 15-30% of stroke survivors live with permanent impairment.⁹ Someone with CHD is five-to-seven times more likely to have a heart attack and twice as likely to suffer a stroke as is someone with a healthy heart.^{10, 11}

Table 1. Percent of adults with CVD modifiable risk factors, MA vs. Healthy People 2010 targets, 2003

Modifiable Risk Factor	PERCENT OF ADULTS	
	MA %	HP 2010 Goal
High blood pressure	22%	16%
High cholesterol	30%	17%
Tobacco use	19%	12%
Obesity	17%	15%
Diabetes	6%	2.5%

Sources: MBRFSS, 2003 and Healthy People 2010



The Importance of Timely Care

In Massachusetts, nearly 40% of all those who die of heart disease and 10% of those who die of stroke die at home, in the community, on the way to the hospital, or in the emergency room.¹

If more people recognized the signs and symptoms of a heart or stroke emergency and understood the importance of calling 9-1-1, many of these deaths could potentially be avoided. Less than one-in-five Massachusetts adults knows all the signs of a stroke. The number drops to one in ten for heart attack (Table 2).⁴

More lives could also be saved through improved emergency response readiness in schools, work-places, and communities as well as a decrease in delays upon arrival at the hospital.

Table 2. Percent of adults correctly identifying each major sign or symptom of heart attack and stroke, MA, 2003

Signs and Symptoms	% Recognizing
Heart Attack	
Chest pain	92
Arm or shoulder pain	83
Shortness of breath	82
Feeling weak or faint	60
Jaw, neck, or back pain	47
Stroke	
Numbness	92
Confusion	84
Dizziness	81
Trouble seeing	64
Severe headache	52

Source: Massachusetts Behavioral Risk Factor Surveillance Survey (MBRFSS), 2003

A COORDINATED RESPONSE

OUR COMMITMENT

Eliminate Health Disparities

Some groups and geographic communities in Massachusetts have higher rates of heart disease and stroke and have more limited access to care than others. The Partnership will focus on improving the heart health of the following high-need groups.

- Residents of Fall River, New Bedford, Lowell, Lawrence, and Springfield
- Ethnic minorities, including Blacks and Hispanics
- Lower-income individuals and families
- People with disabilities
- Clients of the state Department of Mental Health

Members of these groups will be involved in planning and carrying out interventions, assuring that proposed programs meet the needs of their communities.

We Can Reduce Heart Disease and Stroke in Massachusetts

The Partnership for a Heart Healthy Stroke Free Massachusetts has two overarching goals:

- Decrease death and disability from heart disease and stroke.
- Eliminate health disparities.

Our success will require a broad and multifaceted effort. The conditions that lead to heart disease and stroke develop over time, and different stages require different interventions.

- To prevent disease, we must encourage behaviors that protect the heart and blood vessels.
- To control progression, we must identify and monitor people at high risk and improve access to care.
- To save lives, we must respond rapidly when heart attack, cardiac arrest, or stroke occurs.

To meet our goals, we must do all of these things.

Over the past three years, the more than 100 organizations and agencies have documented the scope and impact of heart disease and stroke in our state. They have assessed barriers to healthy behavior and timely care and evaluated opportunities for intervention. Together they have collaboratively developed the comprehensive action plan that follows.

Members of the Partnership have committed to furthering policies and systems that improve heart disease and stroke prevention and treatment in Massachusetts. Specifically, each organization plays one of three roles:

- **Lead partners** contribute resources and assume primary responsibility for specific objectives.
- **Supporting partners** contribute resources toward implementing action plan objectives.
- **Endorsing partners** promote the Partnership as a primary catalyst for heart disease and stroke prevention and treatment efforts.

Under the guidance of the Partnership's 11-member executive committee, four standing committees provide the heartbeat of the Partnership (figure 4, opposite page). Moving forward, the executive committee will monitor the implementation of the statewide action plan. Annually the executive committee will review the plan and present proposed changes to the Partnership membership.





The four standing committees are responsible for providing coordination and support to Partnership members carrying out the state plan objectives. The four standing committees are:

- Surveillance Monitoring and Evaluation
- Policy and Systems
- Health Communication and Education
- Health Disparities and Access to Healthcare

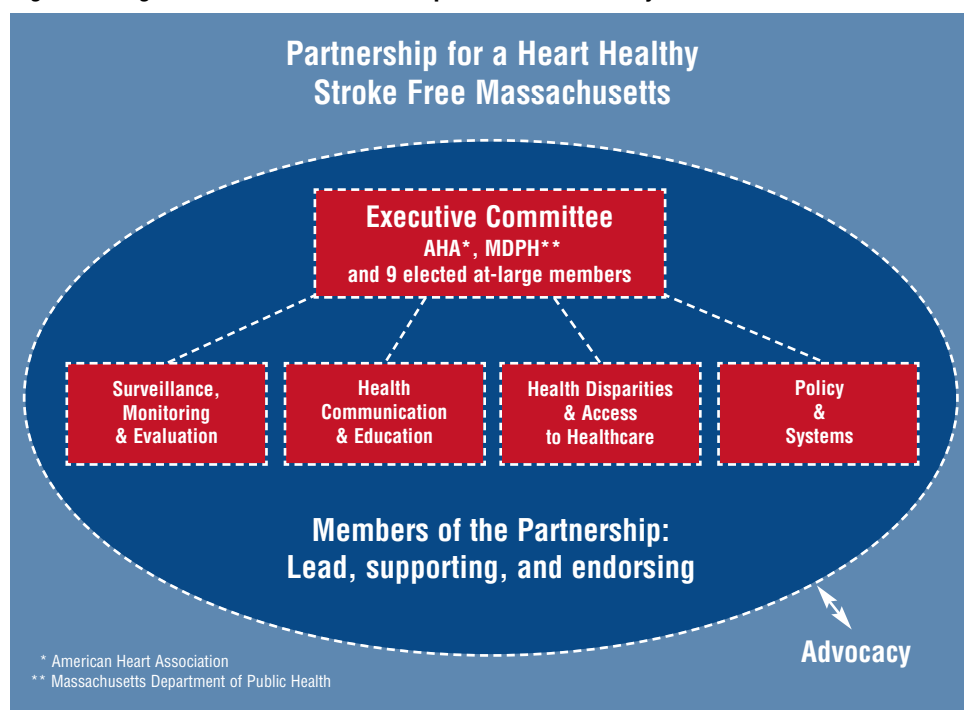
A Coordinated Assault on Chronic Disease

The Partnership is also coordinated with other chronic disease coalitions in the Commonwealth. This plan for action is one of five that will guide a sweeping, statewide effort to combat chronic disease. This effort involves five coalitions:

- The Partnership for a Heart Healthy Stroke Free Massachusetts
- The Partnership for Healthy Weight
- The Comprehensive Cancer Control Coalition
- The Asthma Planning Collaborative
- The Diabetes Coalition of Massachusetts

Because the risk factors that contribute to these conditions are related, the five groups are coordinating their plans. The Partnership for Healthy Weight's plan, for example, focuses primarily on prevention strategies for promoting healthy eating and active living. The Heart Healthy and Stroke Free Massachusetts plan emphasizes identifying individuals at risk; strengthening emergency response to heart attack and stroke; and getting individuals into treatment. These plans address different points along the continuum from prevention to intervention, thus maximizing the resources available for moving Massachusetts residents away from disease, disability, and premature death and toward ever-greater vitality.

Figure 4. Organization of the Partnership for a Heart Healthy Stroke Free Massachusetts



THE PARTNERSHIP'S PLAN FOR ACTION

A Model for Change

For years, people have been urged to quit smoking, eat healthy foods, and become more active while paying little heed to the social forces that can derail even the best-intentioned efforts to change. Today, we recognize that many spheres of influence impact individual behavior. Laws, community resources, workplace policies, family traditions – all can support or hinder heart-healthy living.

This model of behavior change is called the *social-ecological model* (Figure 5). It provides the conceptual underpinning for the Partnership's Plan for Action. As the model suggests, we must simultaneously target multiple spheres of influence if we hope to bring about changes that support a heart-healthy and stroke-free Massachusetts.

The plan for action is organized into three sections that reflect major opportunities for reducing heart disease and stroke:

- Keep Heart and Blood Vessels Healthy
- Recognize and Respond Rapidly to Emergencies
- Identify, Treat, and Manage Disease

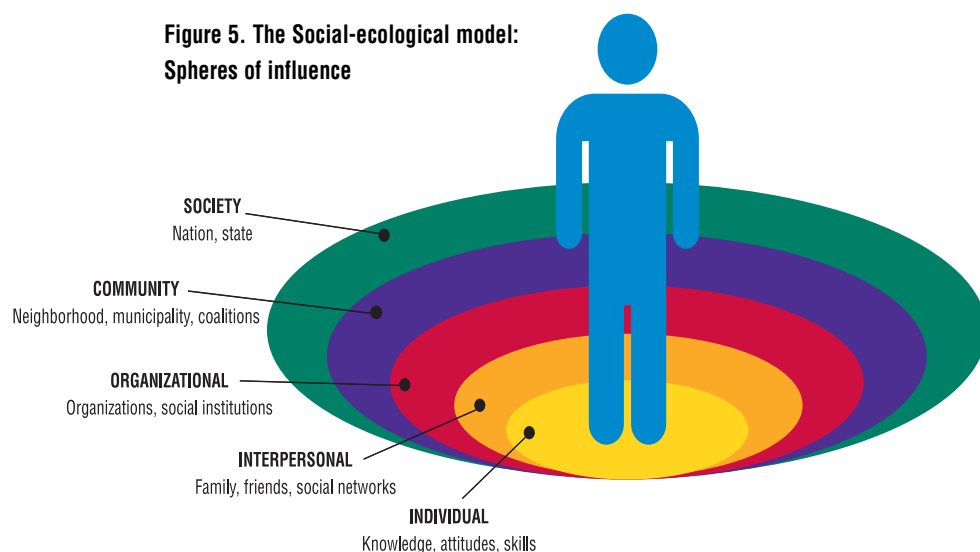
Within each of these sections, the plan identifies specific objectives. The Partnership selected these objectives based on their importance and feasibility, given the resources and strengths of Partnership members.

For each objective, the plan lays out where we are today, the target the Partnership has set for 2010, and the spheres in which change will occur. These “spheres of influence” impact individual behavior and reflect the *social-ecological model*, described in the sidebar “A Model for Change.” There are five distinct spheres of influence addressed in this document:

- Worksites
- Communities
- Healthcare
- Schools
- Public policy

Only by promoting change at all levels will we effectively combat heart disease and stroke.

Finally, wherever possible, the plan identifies Lead and Supporting Partners – agencies, organizations, and other groups committed to the work of transforming this plan into reality. These partners are already working with the groups the Partnership wants to reach and thus are well positioned as agents of change.



KEEP HEART AND BLOOD VESSELS HEALTHY

Five-Year Goal

Decrease premature death from heart attacks and strokes by:

- Improving screening for tobacco use and increasing use of the state's QuitWorks smoking cessation program.
- Reducing exposure to second hand smoke in Massachusetts work-places.
- Raising awareness of the causal relationship between work-related stress and cardiovascular diseases, and promoting changes in the work-place that prevent and reduce job stress.

Life-saving action to stop heart disease and stroke begins with prevention. The Partnership plan targets tobacco use and stress at work. Tobacco use has the greatest impact on risk for heart disease and stroke. Since working adults spend the greatest part of their day on the job, lowering work-related stress can make an important contribution to combating CVD.

Supporting partners for these objectives are: YWCA of Central Massachusetts, Inc.; Taunton Student Health Corp; Massachusetts National Guard; Springfield Health Coalition; University Health Services, University of Massachusetts, Boston; Mass. Assoc. of Health Boards; Partners for a Healthier Community, Inc.; Needham Public Schools; Massachusetts Municipal Association; HealthSouth Rehabilitation Hospital of Western Massachusetts; Massachusetts Department of Public Health; Massachusetts Association of Health Plans; and Brigham and Women's Hospital; and Harwich Council on Aging.

Objective 1: Decrease Massachusetts employees' exposure to second-hand smoke by enforcing the worksite smoking ban law.

Spheres of influence: Public Policy
Communities
Worksites

Lead Partner: Massachusetts Department of Public Health Tobacco Control Program

Where we are: In 2002, 74% of working adults in Massachusetts reported no second-hand smoke exposure at work.

Target 2010: 95% of working adults in Massachusetts will report no second-hand smoke exposure at work.

Background: Even nonsmokers who are exposed to second-hand smoke are at increased risk of dying from heart disease. These "passive smokers" have an increased risk of stroke as well.¹³ The Massachusetts Smoke-free Workplace Law (M.G.L. chapter 270, section 22) was implemented in July 2004 and required workplaces to be smoke-free. Partnership members will work with policymakers and employers to ensure that the state's smoke-free worksites law is enforced and that any future amendments to the law do not weaken it.





Objective 2: Expand use of the QuitWorks tobacco cessation program by agencies that serve individuals with disabilities in Massachusetts.

Spheres of influence: Healthcare
Community

Lead Partner: Massachusetts Department of Public Health Office on Health and Disabilities

Where we are: No network of agencies serving disabled people systematically promotes QuitWorks.

Target 2010: At least one network of agencies serving individuals with disabilities will use QuitWorks.

Background: QuitWorks is a free stop-smoking service created by the Massachusetts Department of Public Health and the major health plans across the state. It provides confidential information and tobacco treatment counseling by telephone for any Massachusetts resident, regardless of health insurance coverage. The Partnership seeks to expand use of the QuitWorks program for individuals with disabilities because tobacco use is much higher in this group than in the general public (25% vs. 19% for people without disabilities).^{4,14}

Objective 3: Create, standardize, and implement a tobacco reduction and cessation program in inpatient facilities operated or contracted by the Massachusetts Department of Mental Health.

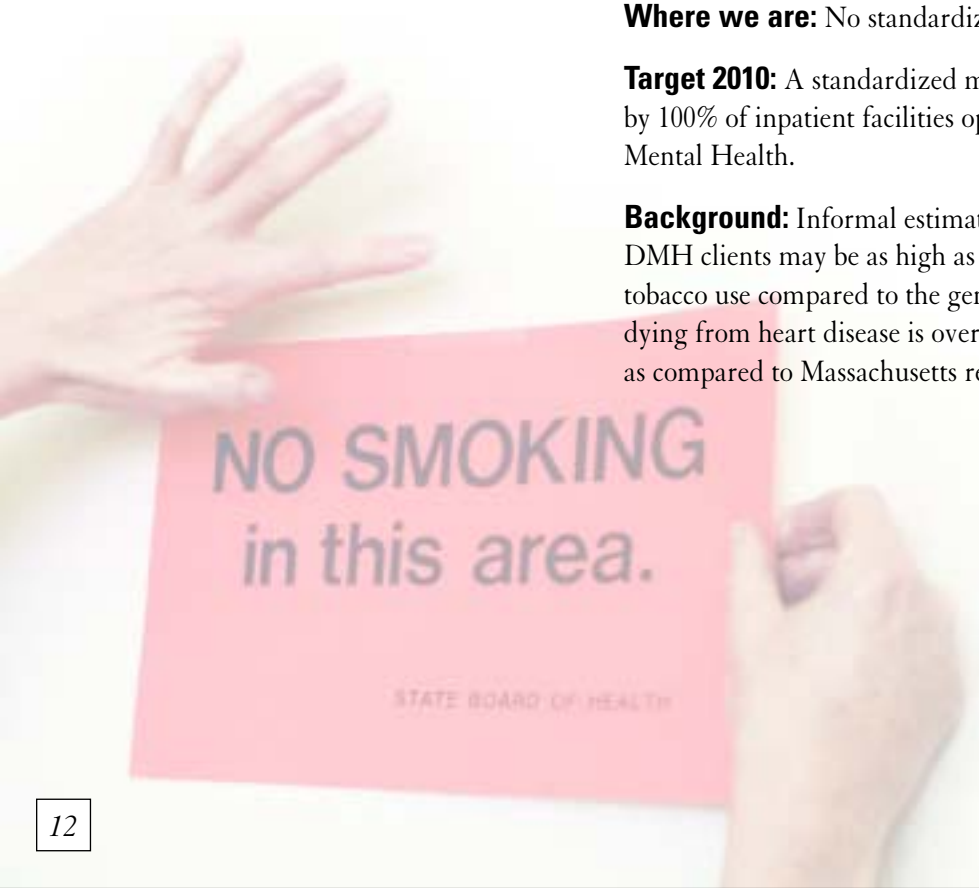
Sphere of influence: Healthcare

Lead Partner: Massachusetts Department of Mental Health (DMH)

Where we are: No standardized model exists.

Target 2010: A standardized model will be developed and will be implemented by 100% of inpatient facilities operated or contracted by the Department of Mental Health.

Background: Informal estimates suggest that the prevalence of smoking among DMH clients may be as high as 70%.¹⁵ This is an exceptionally high rate of tobacco use compared to the general population (19%). Additionally, the risk of dying from heart disease is over three times higher for DMH clients age 25 to 64 as compared to Massachusetts residents in this same age group.¹⁶





Objective 4: Increase awareness among health and occupational professionals of the causal relationship between work-related stress and the development of heart disease and stroke.

Lead Partner: No current lead partner

Spheres of influence: Worksites
Healthcare

Where we are: Unknown

Target 2010: Unknown

Background: Studies indicate that both acute and chronic stress can adversely affect the cardiovascular system.^{17, 118, 19} Work stress, in particular, has been linked to an increased risk of coronary heart disease.²⁰ For these reasons, the Partnership has made reducing on-the-job stress a priority. The first step in reaching this objective is to make health professionals, workers, and management aware of the problem. The second step is to identify the conditions that contribute to work-related stress and to make strategies for changing them known to both employers and employees.

RECOGNIZE AND RESPOND RAPIDLY TO EMERGENCIES

Five Year Goal

Decrease deaths and disability from heart attacks and strokes by:

- Improving knowledge of the signs and symptoms of heart attack and stroke.
- Increasing the number of Emergency Medical Technicians (EMTs) trained to recognize stroke.
- Increasing the number of hospitals with Primary Stroke Service designation.
- Increasing the provision of interpreter services for 9-1-1 calls
- Improving the quality of heart attack care provided in ambulances.
- Increasing the number of HeartSafe communities.
- Increasing the number of worksites with valid emergency response plans for heart attack.
- Promoting legislation that requires all schools to have a recognized emergency response plan for heart attack and stroke.
- Sustaining a collaborative to improve the quality of stroke care.

Heart and stroke emergencies end in death more often than other health-related emergencies in part because they demand such a rapid response.³⁰ By reducing the time that passes between the moment symptoms begin and treatment starts, we can save lives. One key to meeting this goal is improving recognition of the signs and symptoms of heart attack and stroke. Another is assuring that the response from each individual in the “chain of survival” – from bystanders to emergency medical technicians (EMTs) to emergency room doctors – is optimal.

Supporting partners for these initiatives are: YWCA of Central Massachusetts, Inc.; Taunton Student Health Corp; Massachusetts National Guard; Lowell Community Health Center; Springfield Health Coalition; University Health Services, University of Massachusetts, Boston; Mass. Assoc. of Health Boards; Partners for a Healthier Community, Inc.; Westwood Senior Center and Council on Aging; Needham Public Schools; Massachusetts Department of Public Health; Southcoast Hospitals Group; HealthSouth Rehabilitation Hospital of Western Massachusetts; Fallon Ambulance Service; Professional Ambulance Service; American Heart Association/American Stroke Association; Baystate Medical Center; Boston Emergency Medical Services; Boston Association of Health Plans; Massachusetts Partnership for Healthy Communities/The Medical Foundation; Brigham and Women’s Hospital; and Harwich Council on Aging.

Objective 5: Increase knowledge and recognition of stroke warning signs and symptoms among Massachusetts adults.

Sphere of influence: Communities

Lead Partners: Massachusetts Department of Public Health Heart Disease and Stroke Prevention and Control Program and the American Stroke Association

Where we are: In 2003, 17.5% of Massachusetts adults recognized all the signs and symptoms of stroke.



Target 2010: Increase the proportion of people who recognize all the signs and symptoms of stroke to 22%.

Background: Minutes mean the difference between recovery and permanent disability or death for stroke victims.²¹ Yet less than

one-in-five Massachusetts residents knows all the signs and symptoms.⁴ A better educated public will get to the hospital sooner, reducing the number of people who experience stroke’s most devastating consequences.



Objective 6: Increase the number of EMTs trained to use the Boston Operation Stroke Scale (BOSS) or its equivalent to identify stroke.

Sphere of influence: Healthcare

Lead Partner: Massachusetts Department of Public Health Office of Emergency Medical Services

Where we are: EMTs have received training on recognizing the signs and symptoms of stroke using various scales.

Target 2010: All current and newly hired EMTs will have received consistent training using BOSS or the equivalent.

Background: Standardizing assessment will assure a higher rate of correctly identified strokes, resulting in faster treatment once the patient arrives at the hospital. BOSS is a widely accepted instrument designed to measure patient-reported difficulty in many areas of functioning.

Objective 7: Increase the number of Massachusetts hospitals with Primary Stroke Service designation so that all residents will have prompt access to stroke treatment within the appropriate clinical timeframe.

Sphere of influence: Healthcare

Lead Partner: Massachusetts Department of Public Health Division of Health Care Quality

Where we are: The Division of Health Care Quality surveyed and approved 54 hospitals for the purpose of Primary Stroke Service Designation. These hospitals have established the critical elements necessary to promptly assess and treat patients who present with symptoms of Acute Ischemic Stroke. The approval of these 54 hospitals marks a completion total of 75%. An assessment of progress in meeting this objective will be based on a project base of 72 Emergency Departments (Hospitals) in Massachusetts.

Target 2010: 100% of hospitals treating stroke will have Primary Stroke Service designation.

Background: Individuals who receive treatment within three hours of the first symptoms of a stroke have the best chance of surviving without brain damage. By assuring that every Massachusetts resident will have prompt access to stroke treatment within the appropriate clinical timeframe, we will save more lives and decrease rates of disability.





Objective 8: Increase provision of interpreter services for non-English speaking 9-1-1 callers in Massachusetts.

Spheres of influence: Public Policy
Communities

Lead Partner: State Emergency Telecommunications Board

Where we are: State Emergency Telecommunications Board and supporting partners will be surveying all Massachusetts Public Safety Access Points to determine availability of interpreter services for non-English speaking 9-1-1 callers.

Target 2010: To be determined.

Background: According to the 2000 US Census, nearly 19% of Massachusetts residents over the age of five speak a language other than English at home. Eight percent speak English “less than very well.” These percentages are substantially higher in certain communities, where up to two-thirds of the population does not speak English at home and a third does not speak it very well. These statistics do not tell the whole story, however, because they do not include the many undocumented people living in the state. Given this large non-English speaking population and the tendency of foreign-born English speakers to revert to their native language in emergency situations, having interpreter services available for those who call 9-1-1 is essential. We do not currently know how commonly such services are used in the Commonwealth. Valuable resources may be wasted and lives lost due to inefficiency in responding to emergencies involving non-English speakers.

Objective 9: Improve the quality of care for heart attack (acute cardiac ischemia) in pre-hospital settings through feedback reports on the process and outcomes of patient care.

Sphere of influence: Healthcare

Lead Partner: The Institute for Clinical Research and Health Policy Studies, Tufts-New England Medical Center

Where we are: Currently, neither a coordinated system to monitor existing quality improvement (QI) measures for heart attacks nor feedback mechanisms for improving EMTs’ recognition of heart attacks is in place.

Target 2010: Heart attack care QI measures and an EMT feedback reporting system will be developed, piloted, and made available to 20% of the contracting EMS agencies in Massachusetts.

Background: Paramedics responding to 9-1-1 calls are the frontline healthcare providers for people suffering a heart attack. Paramedics must get feedback on their performance and track progress to improve patient care over time. QI measures need to be routinely monitored in the pre-hospital setting to ensure that patients receive care according to state-mandated chest pain protocols.





Objective 10: Increase the number of Massachusetts cities and towns designated as HeartSafe Communities.

Sphere of influence: Communities

Lead Partners: Massachusetts Department of Public Health Office of Emergency Services and the American Heart Association

Where we are: 111 out of 351 cities and towns were designated as HeartSafe Communities as of April 2005.

Target 2010: 100% of cities and towns will be designated HeartSafe by 2010.

Background: The HeartSafe Community program encourages the Commonwealth's cities and towns to improve early access to emergency care; use of cardiopulmonary resuscitation (CPR) and automatic external defibrillation (AED); and early access to advanced care in order to give someone whose heart has stopped the best chance of survival.²² Towns that meet the program's requirements can apply for HeartSafe Community designation.

Objective 11: Increase the number of Massachusetts worksites with emergency response plans for heart attack.

Sphere of influence: Worksites

Lead Partners: American Heart Association and Massachusetts Department of Public Health Heart Disease and Stroke Prevention and Control Program

Where we are: The Massachusetts Department of Public Health will be surveying worksites to establish a baseline.

Target 2010: Unknown

Background: Emergency response plans provide guidance for responding to a heart attack or cardiac arrest that occurs at work. Since AEDs have been shown to increase survival rates during cardiac arrest, plans will include placement and training in the use of AEDs in addition to CPR training.



Objective 12: Promote legislation that requires all Massachusetts schools to have a recognized emergency response plan for heart attack and stroke, including CPR training and placement of and training in the use of AEDs: automated external defibrillators, as appropriate.

Sphere of influence: Schools

Lead Partner: American Heart Association

Where we are: No legislation currently exists.

Target 2010: Legislation implemented to require emergency response plans in schools.

Background: On any day, up to 20% of all Americans – children and adults – can be found at a school. In order to best respond to unpredictable emergencies, schools need to develop emergency medical response plans. Establishing such plans will help schools be prepared to properly respond to life-threatening emergencies in the critical first few minutes before emergency medical services arrive.



Objective 13: Sustain the Stroke Collaborative Reaching for Excellence (SCORE) to foster an improvement in stroke care.

Sphere of influence: Healthcare

Lead Partner: Massachusetts Department of Public Health Heart Disease and Stroke Prevention and Control Program and the American Stroke Association

Where we are: 36 acute care hospitals were funded to participate in the Paul Coverdell National Acute Stroke Registry as of June 2005.

Target 2010: At least 50% of Massachusetts Primary Stroke Service designated hospitals will participate in SCORE and improvement will be shown in at least 2 quality indicators of stroke care.

Background: In 2001, Congress provided funding to CDC to develop and implement state-based registries that measure, track, and improve the delivery and quality of stroke care. CDC has awarded Massachusetts funds to implement the Paul Coverdell National Acute Stroke Registry and provide technical support to help acute care hospitals with designated primary stroke services participate in the registry and its quality improvement collaborative. The Massachusetts Department of Public Health (MDPH), with the American Stroke Association (ASA), will integrate two national programs, the Paul Coverdell National Acute Stroke Registry and ASA's *Get With The Guidelines - Stroke*, to improve stroke care in Massachusetts. SCORE is a partnership between MDPH, ASA, and participating acute care hospitals in the Commonwealth, working to help standardize care for stroke patients, and ultimately eliminate disparities in stroke care.

IDENTIFY, TREAT, AND MANAGE DISEASE

Five-Year Goal

Decrease premature death from heart attacks and strokes by:

- Expanding use of QuitWorks to the Women's Health Network and Men's Health Partnership.
- Expanding use of QuitWorks in Community Health Centers.
- Developing a model for a Massachusetts State Diabetes Collaborative.
- Creating a chronic disease quality improvement collaborative for primary care physicians.
- Increasing electronic medical records use among physicians in small practices.
- Increasing the number of hospitals implementing the *Get with the Guidelines – Coronary Artery Disease* program.
- Increasing evidence-based policies to prevent and control chronic diseases in worksites in Fall River, New Bedford, Springfield, Lowell, and Lawrence.

We have excellent medical treatments and strategies for risk factor modification to prevent and control heart disease and stroke. Improved access for certain groups, better coordination among providers in different venues, and systematic adherence to established national treatment guidelines would make these services more consistently available to our residents. Each of these areas is a target for Partnership intervention.

Supporting Partners for these objectives are:

YWCA of Central Massachusetts, Inc.; Taunton Student Health Corp; Springfield Health Coalition; University Health Services, University of Massachusetts, Boston; Mass. Assoc. of Health Boards; Partners for a Healthier Community, Inc.; Office of Community Programs, University of Massachusetts Medical School; Manet Community Health Center; Massachusetts Municipal Association; Sensible Nutrition Connection, Inc.; Brigham and Women's Hospital; Massachusetts Department of Public Health; Massachusetts Association of Health Plans; Southcoast Hospitals Group; Massachusetts Public Health Association; and Harwich Council on Aging.



Objective 14: Expand use of the tobacco cessation program QuitWorks in healthcare sites within the Massachusetts Department of Public Health's Women's Health Network (WHN) and the Men's Health Partnership (MHP).

Sphere of influence: Healthcare

Lead Partners: Massachusetts Department of Public Health Women's Health Network and Men's Health Partnership

Where we are: 35% of healthcare settings in WHN and 30% of those in MHP that serve racial and ethnic minorities use QuitWorks and tobacco cessation programs.

Target 2010: 100% of healthcare sites in WHN and MHP serving racial and ethnic minorities will use QuitWorks and tobacco cessation programs.

Background: The Partnership seeks to expand use of the QuitWorks program to adults participating in two state-run healthcare programs serving low-income, minority residents. These patients have higher rates of smoking than average for the state. QuitWorks is the free stop-smoking service that provides confidential information and tobacco treatment counseling by telephone for any Massachusetts resident regardless of health insurance coverage.

Objective 15: Expand adoption of the tobacco cessation program QuitWorks in Massachusetts community health centers that serve low-income populations and racial and ethnic minorities at high risk for chronic disease.

Sphere of influence: Healthcare

Lead Partner: Massachusetts Department of Public Health Tobacco Control Program

Where we are: No community health centers had formally adopted QuitWorks as of June 2004.

Target 2010: 25 (50%) community health centers will adopt QuitWorks.

Background: Low-income individuals and members of racial/ethnic minority groups are less likely to have health insurance than Whites and have higher levels of many of the conditions that put people at risk for heart disease and stroke.¹² For these reasons, the Partnership has made a priority of providing these groups with access to QuitWorks, which is free to Massachusetts residents regardless of health insurance status.

Objective 16: Develop and implement a state-based chronic care collaborative model among select community health centers of the Commonwealth.

Sphere of influence: Healthcare

Lead Partner: Massachusetts Department of Public Health Diabetes Prevention and Control Program

Where we are: No state supported chronic disease collaborative models exist.

Target 2010: *All eligible** Massachusetts community health centers will have the opportunity to participate in a chronic disease quality improvement collaborative.

Background: In 1998, the Bureau of Primary Health Care (BPHC), in partnership with the Institute of Healthcare Improvement (IHI) formed the Health Disparities Collaborative to eliminate health disparities and improve access to care. The BPHC model engages organizations in making system-level changes that lead to dramatic improvements in care. Collaborative participants benefit from access to topic experts, as well as to the experiences of other participating organizations. The Massachusetts Diabetes Prevention and Control Program, along with the Massachusetts League of Community Health Centers will lead the effort to develop and implement a state based chronic disease collaborative, modeled on the BPHC, to increase access to quality diabetes and cardiovascular disease care at eligible community health centers. The results will be sustainable programs that integrate evidence-based practices.

**Community health centers not currently participating in the federally funded Health Disparities Collaborative*

Objective 17: Create a chronic disease quality improvement collaborative among small, primary care physician offices using the Care Model, with special attention to New Bedford, Fall River, Springfield, Lowell, and Lawrence.

Sphere of influence: Healthcare

Lead Partner: No current lead partner

Where we are: Unknown

Target 2010: Unknown

Background: Using the IHI/BPHC collaborative quality improvement model described under Objective 16, the state-based chronic disease quality improvement collaborative will be expanded to include health care practices across the Commonwealth.

Objective 18: Increase the number of primary adult care practices in Massachusetts adopting electronic medical records (EMR) and exporting quality improvement data for coronary artery disease (CAD), high blood pressure (HBP), and heart failure.

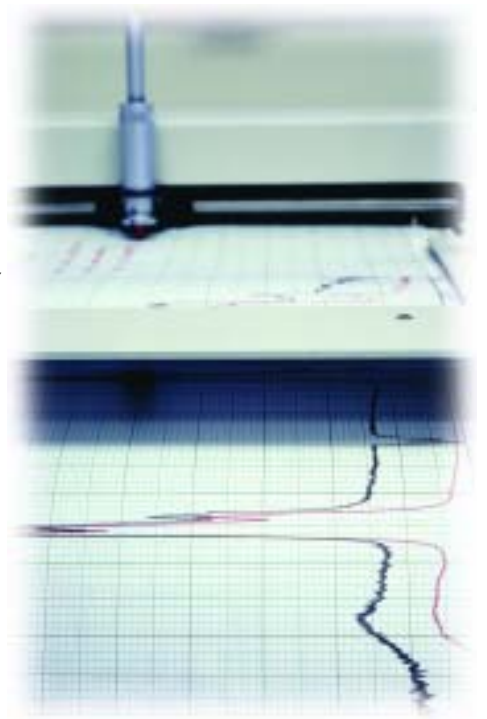
Sphere of influence: Healthcare

Lead Partner: No current lead partner

Where we are: No practices currently export quality improvement data.

Target 2010: 120 small, primary care office sites will adopt electronic medical records and export quality improvement data on coronary artery disease, high blood pressure, and heart failure.

Background: A recent Institute of Medicine Report (Fostering Rapid Advances in Health) concluded that adoption of electronic medical records could significantly improve quality and efficiency in delivering healthcare. Despite the potential gains in patient-clinician communication, access to patient information, and data tracking, few physician offices in Massachusetts have implemented EMRs. Since these practices provide the majority of patient care, the use of EMRs to export quality improvement data on common heart conditions has the potential to substantially improve outcomes for Massachusetts patients.



Objective 19: Increase the number of Massachusetts acute care hospitals that implement and use the American Heart Association's *Get with the Guidelines – Coronary Artery Disease* (GWTG-CAD) program.

Sphere of influence: Healthcare

Lead Partner: American Heart Association

Where we are: 25 Massachusetts hospitals (35%) were using GWTG-CAD as of April 2005.

Target 2010: All eligible hospitals will use GWTG-CAD.

Background: The American Heart Association developed the GWTG-CAD program to improve the quality of treatment for heart disease in inpatient hospital settings. The program establishes protocols that support coordination among healthcare providers and assure that patients are treated and discharged with appropriate medications and with risk modification counseling.²⁵

Objective 20: Increase the number of worksites with evidence-based policies and systems in place to prevent and control chronic diseases, including heart disease and stroke, in Fall River, New Bedford, Springfield, Lowell, and Lawrence.

Sphere of influence: Healthcare

Lead Partner: Massachusetts Department of Public Health Heart Disease and Stroke Prevention and Control Program

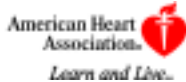
Where we are: Unknown

Target 2010: Unknown

Background: According to a 2001 Massachusetts Department of Public Health survey, only a quarter of employers with 50 or more employees provide blood pressure screening and fewer offer cholesterol or blood glucose screenings. While around half of these employers reimburse employees for dietary counseling (56%) or smoking cessation programs (48%), fewer offer programs themselves. Improving on-the-job access to services that prevent and control chronic diseases could have a substantial impact on health: two-thirds of Massachusetts adults 18 and older are in the workforce. Of those aged 65 and older, 13% are still employed full or part time.²²



LEADING AND SUPPORTING PARTNERS



Leading Partners

American Heart Association/ American Stroke Association

Shannon Melluzzo, 413-735-2104
shannon.melluzzo@heart.org



Massachusetts Department of Mental Health

Sally Reyerer, 617-626-8109
sally.reyerer@DMH.state.ma.us



Massachusetts Department of Public Health

800-487-1119
heart.stroke@state.ma.us



Office of Public Safety, State Emergency Telecommunications Board

Peter Ostroskey, 339-203-0911
peter.ostroskey@state.ma.us



Tufts-New England Medical Center
Floating Hospital for Children

The Institute for Clinical Research and Health Policy Studies, Tufts-New England Medical Center

Denise Daudelin, 617-636-8237
dhartnett-daudel@tufts-nemc.org

Supporting Partners

Boston Emergency Medical Services

Baystate Medical Center

Brigham & Women's Hospital,
Center for Cardiovascular Disease in Women

Fallon Ambulance Service

Harwich Council on Aging

HealthSouth Rehabilitation Hospital of
Western Massachusetts

Lowell Community Health Center

Manet Community Health Center

Massachusetts Association of Health Boards

Massachusetts Association of Health Plans

Massachusetts Municipal Association

Massachusetts National Guard

Massachusetts Department of Public Health,
Office of Employee Programs

Massachusetts Department of Public Health,
Office of Rural Health

Massachusetts Partnership for Healthy Communities,
The Medical Foundation

Massachusetts Public Health Association

Needham Public Schools

Partners for a Healthier Community, Inc.

Professional Ambulance Service

Sensible Nutrition Connection, Inc.

Southcoast Hospitals Group

Springfield Health Coalition

Taunton Student Health Corp

University of Massachusetts Medical School,
Office of Community Programs

University of Massachusetts, Boston,
University Health Services

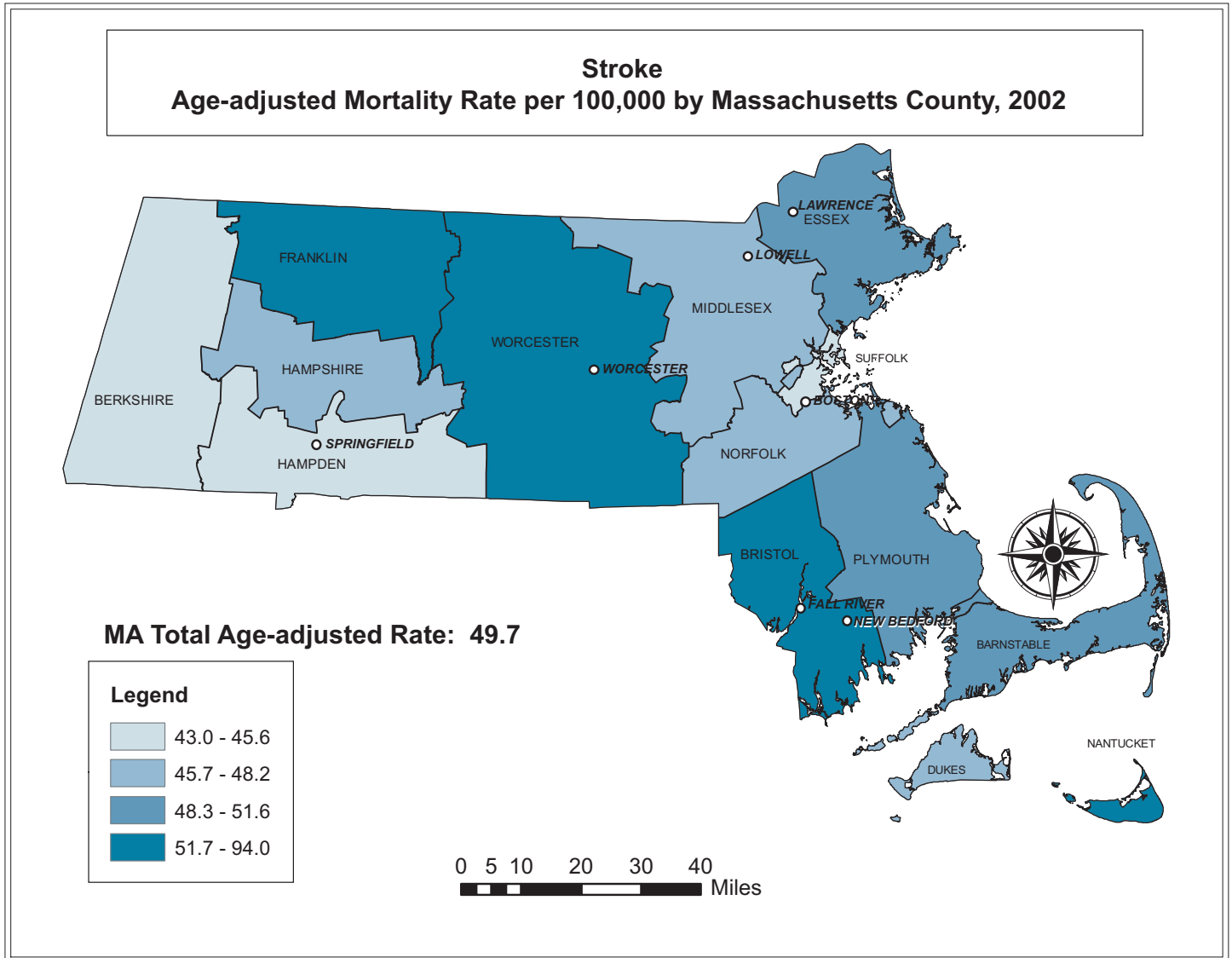
Westwood Senior Center & Council on Aging

YWCA of Central Massachusetts

ENDORISING PARTNERS

American Medical Response
Codman Square Community Health Center
Cohasset Board of Health
Dennis Health Department
Dorchester House Multi-Service Center
DotWell
Elder Health, Boston Public Health Commission
Executive Office of Transportation
Fall River Department of Health and Human Services
Family Health Center of Worcester, Inc. (The Southeast Asian Health Program)
Harvard Pilgrim Health Care Foundation
Health First Family Care Center, Inc.
Health New England
Latin American Health Institute
Lahey Clinic
Massachusetts Bicycle Coalition (MassBike)
Massachusetts Health Quality Partners
Massachusetts Parent Teacher Association
Neighborhood Diabetes
(EOHHS) Office of Medicaid (MassHealth)
Southcoast Health System
Tobacco Free Mass Coalition
Tufts Medical School, Department of Public Health and Family Medicine
University of Massachusetts Extension, Central Region
WalkBoston
Western Massachusetts Center for Healthy Communities
Women's Eye Health Task Force – The Schepens Eye Research Institute
Worcester EMS/UMASS Memorial Paramedics

APPENDIX A - Stroke Death Rates



Source: MDPH, Registry of Vital Records and Statistics, 2002

ICD 9 Codes: 430 - 434, 436 - 438

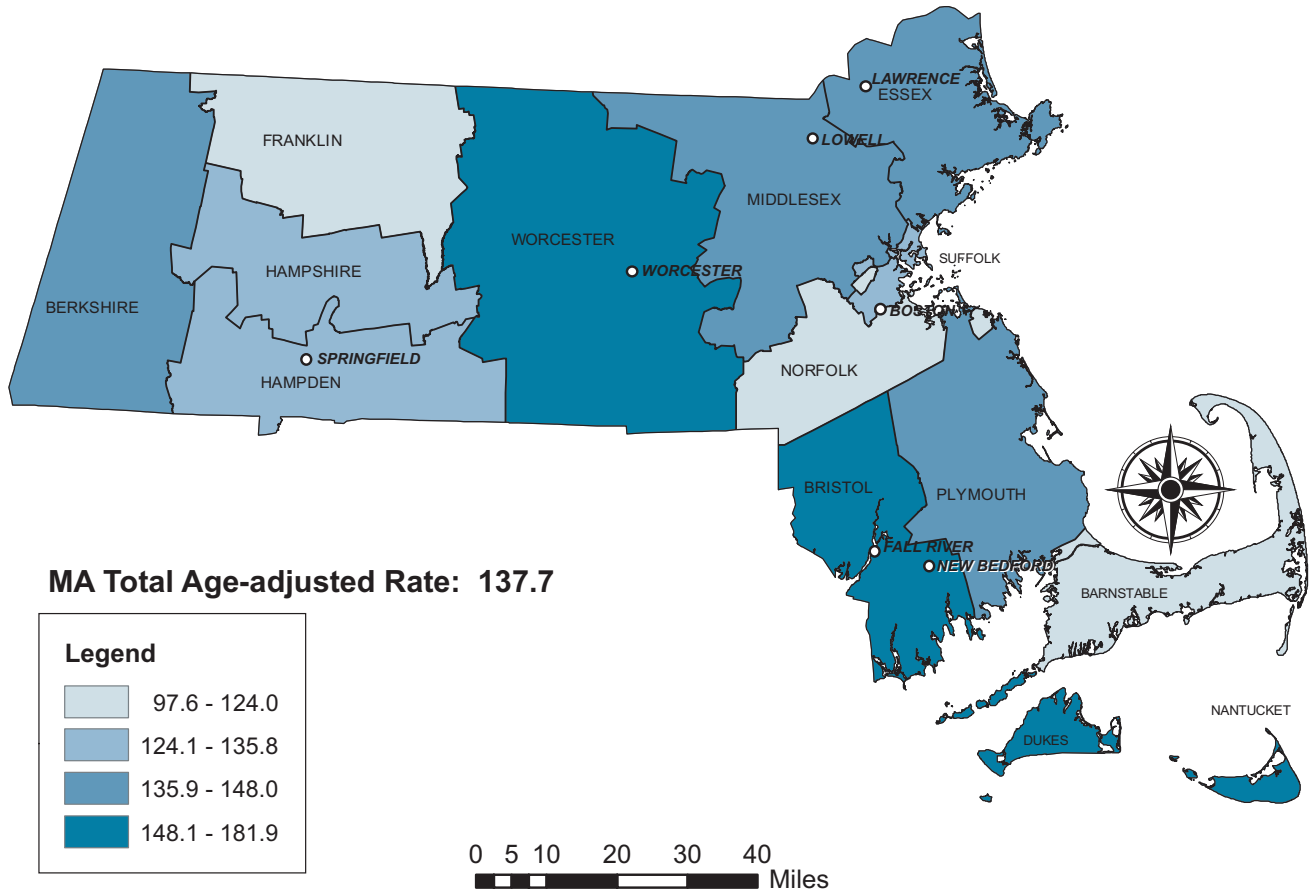


MASS GIS

Source data supplied by the
Massachusetts Executive Office of Environmental Affairs, MassGIS

APPENDIX A - CHD Death Rates

CHD
Age-adjusted Mortality Rate per 100,000 by Massachusetts County, 2002



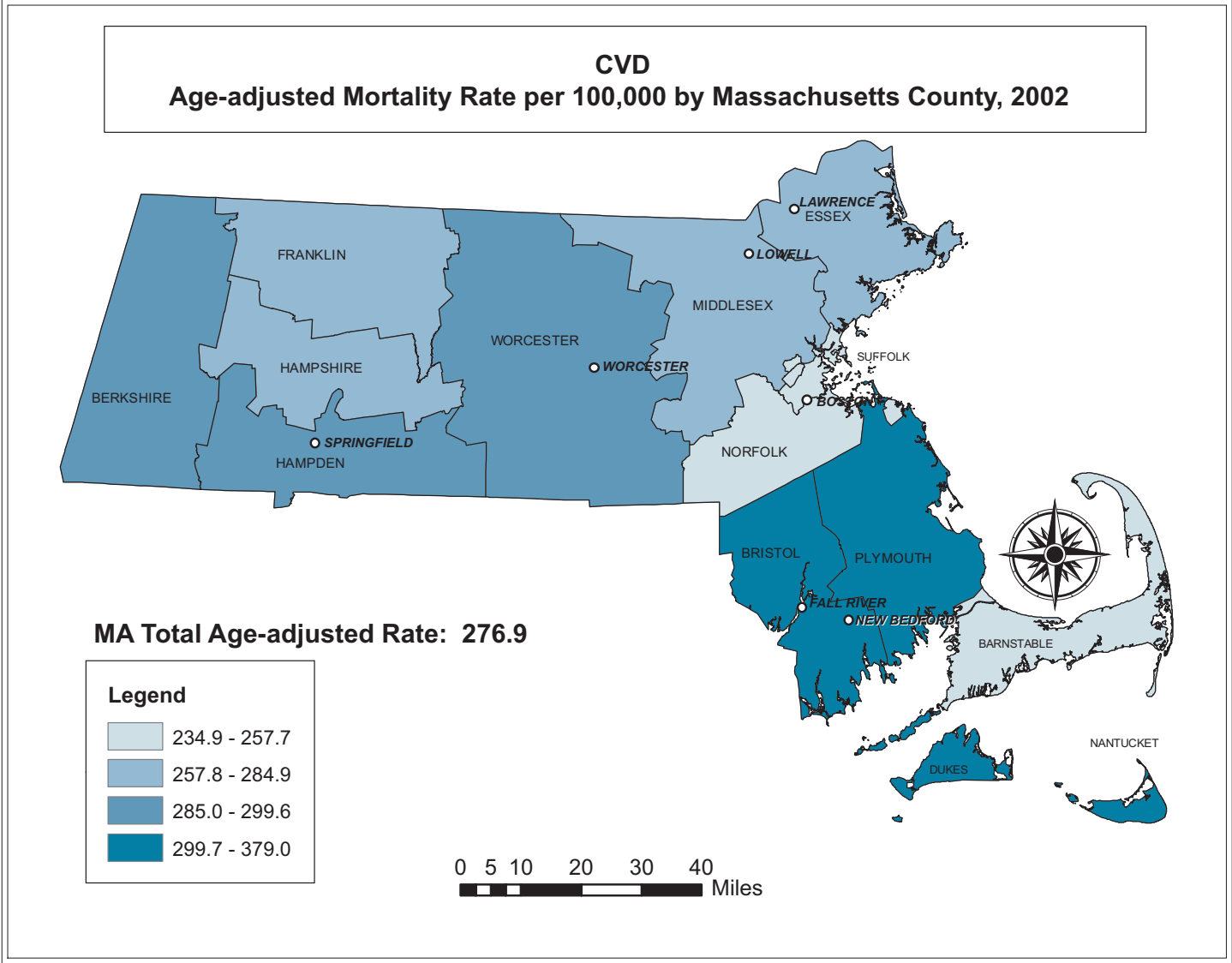
Source: MDPH, Registry of Vital Records and Statistics, 2002

ICD 9 Codes: 410 - 414



Source data supplied by the
Massachusetts Executive Office of Environmental Affairs, MassGIS

APPENDIX A - CVD Death Rates



Source: MDPH, Registry of Vital Records and Statistics, 2002

ICD 9 Codes: 390 - 448



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INTERESTED IN JOINING OR SUBMITTING A NEW OBJECTIVE?



If you are interested in proposing a NEW OBJECTIVE for Massachusetts' Coordinated Response to Heart Disease and Stroke or interested in becoming a MEMBER of the Partnership, please fill out the following and send to the PHHSFM Executive Committee, c/o Partnership Coordinator, Heart Disease and Stroke Prevention and Control Program, Massachusetts Department of Public Health, 250 Washington Street, 4th Floor, Boston, MA 02108 or heart.stroke@state.ma.us

Name: _____

Organization: _____

email address: _____

Phone number: _____

Mailing Address:



Interest in proposing a NEW OBJECTIVE: _____

Summary of New Objective:

Interested in becoming a MEMBER of the Partnership:

If you are interested in becoming an official member of the Partnership you must select a level of commitment to the statewide plan for your organization. Please check one.

☐ **Endorsing Partner** *Participates in the promotion of the Coalition as a primary catalyst for heart disease and stroke prevention and treatment efforts in Massachusetts. Allows the use of organization or individual's name on documents related to the statewide action plan.*

☐ **Supporting Partner** *Contributes resources (staff, funds, or other relevant in-kind support) to implement activities related to 1 or more 5-year objectives for a local setting (community, work site, healthcare and/or school settings) and/or specific focus area. Allows the use of organization or individual's name with one or more 5-year objectives in the statewide action plan and related documents.*

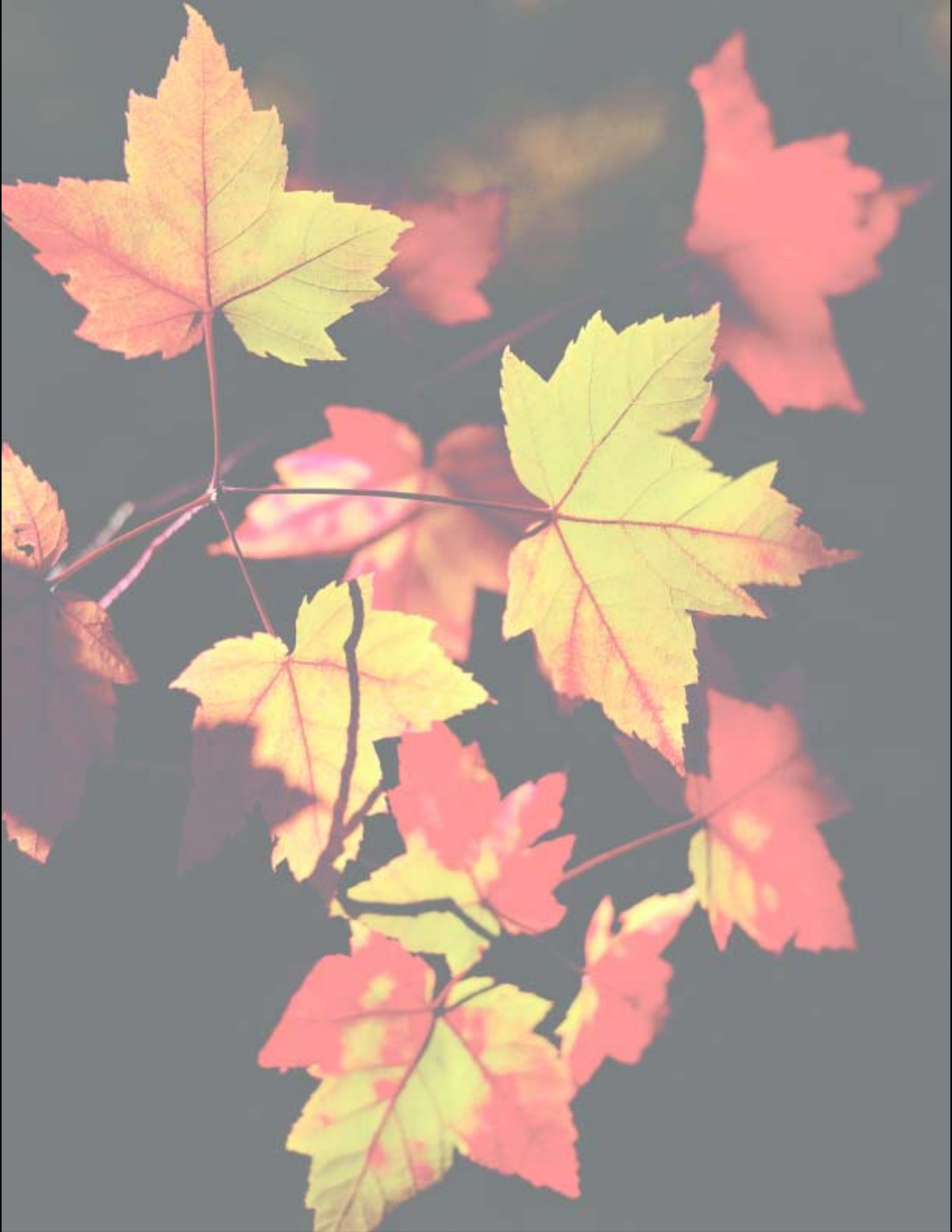
Thank you for your participation!

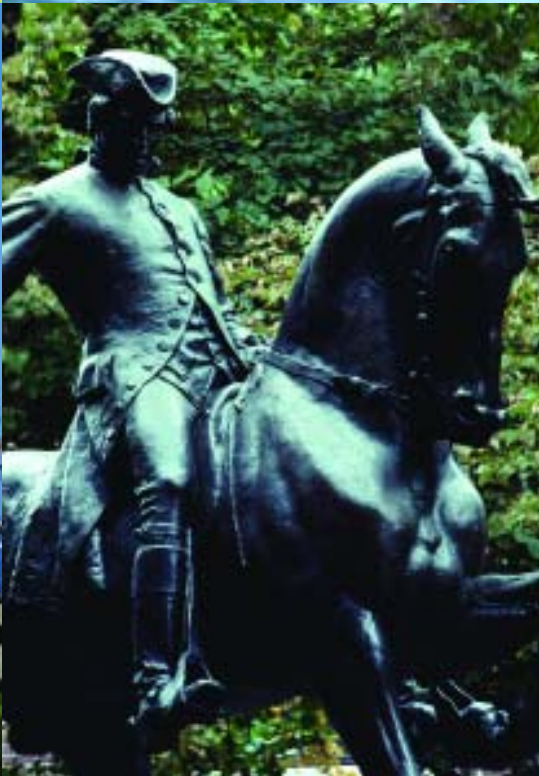
F O L D H E R E

AFFIX
FIRST
CLASS
POSTAGE
HERE

PHHSFM Executive Committee
c/o Partnership Coordinator
Heart Disease and Stroke Prevention and Control Program
Massachusetts Department of Public Health
250 Washington Street, 4th Floor
Boston, MA 02108

S E C U R E W I T H T A P E B E F O R E M A I L I N G





**Partnership for a
Heart Healthy
Stroke Free Massachusetts**